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ABSTRACT

This paper presents some ideas to preschool educators and policy makers about how to make validated educational models central in standards for preschool education and care programs that are available to all 3- and 4-year-olds. Defining an educational model as a coherent body of program practices, curriculum content, program and child, and teacher training, the paper notes that educational models are meant to contribute to all aspects of children's development, including intellectual, social, and physical development. A model is validated if its effectiveness in contributing to children's development has been scientifically confirmed. Replication of validated educational models is critical if the results these models promise are to be realized on a widespread basis; regulatory, professional, and outcomes-based standards all have roles in promoting such replication by supporting the role of independent model developers. The paper proposes seven key standards for validated educational models: comprehensiveness, documentation, internal consistency, capacity for faithful implementation, model effectiveness, training effectiveness, and capacity for and breadth of dissemination. (Contains 24 references.) (Author/KB)

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Making Validated Educational Models Central in Preschool Standards

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Abstract

This paper presents some ideas to preschool educators and policy makers about how to make validated educational models central in standards for preschool education-and-care programs that are available to all 3- and 4-year-olds. An *educational model* is a coherent body of program practices, curriculum content, program and child assessment, and teacher training. *Educational* models are meant to contribute to all aspects of children's development. A model is *validated* if its effectiveness in contributing to children's development has been scientifically confirmed. Replication of validated educational models is critical if the results these models promise are to be realized on a widespread basis. Regulatory, professional, and outcomes-based standards all have roles in promoting such replication by supporting the role of independent model developers. Standards should support educational models that are comprehensive, well-documented, internally consistent, implementable, effective, supported by effective training, and able and beginning to be broadly disseminated.

The Current Moment for Preschool Programs

State preschool programs, Head Start, and child care programs are all at crossroads in their histories. President George W. Bush has indicated a strong interest in harnessing Head Start and other preschool programs to the national effort to have all children achieve literacy and educational success. His interest has prompted unprecedented federal attention to preschool educational models that have evidence of their effectiveness. Although only a handful of states operated state preschool programs a quarter-century ago, four-fifths of them do so today, and

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several of these – Georgia, New York, Oklahoma, Connecticut, Illinois – have taken action towards providing preschool programs for all 4-year-olds whose parents wish to enroll them. These state preschool programs are fertile ground for innovative policymaking. Child care programs must either respond to this new national interest in early childhood education or resign themselves to inadequate public funding and attention and being little more than a stepchild of welfare reform policy.

Some Definitions

To deal with these challenges, this paper presents some ideas to preschool educators and policymakers about how to make validated educational models central in standards for preschool education-and-care programs that are available to all 3- and 4-year-olds. These terms should be defined at the outset.

- An *educational model* is a coherent body of program practices, curriculum content, program and child assessment, and teacher training. Sometimes early childhood educators use the term curriculum to encompass program practices as well as curriculum content; this paper uses the term educational model to subsume this difference in terminology.
- This paper calls models *educational* because they are meant to contribute to children's development in the broad sense – not just literacy and mathematics, but the rest of intellectual, social, and physical development as well. Sometimes education, schooling, and teaching are used in a narrow sense to refer to literacy and mathematics to the exclusion of the rest of children's development. This paper does not mean education in that narrow sense. Education in the broad sense is a major purpose of all early childhood programs – publicly funded Head Start and state preschool programs and privately run

child care programs. Similarly, this paper uses the term preschool to refer to all programs for 3- and 4-year-olds, not just those considered educational in the narrow sense.

- A *program practice*, which may be part of an educational model or not, is a habitual behavioral strategy for addressing selected situations in an educational program.
- A model is *validated* if its effectiveness in contributing to children's development has been scientifically confirmed.
- *Preschool standards* are the means by which some standard-setting group defines what preschool programs are supposed to be and do. Standards specify program policies, teaching practices, curriculum content, and/or desired outcomes for children. The standard-setting group can be governmental with the force of law or professional with the force of identity and affiliation.

This paper begins by considering the strengths and weaknesses of regulatory, professional, and outcomes-based approaches to standards. Next it considers the central importance of replication in taking educational models to full scale and distinguishes the role of developers of educational models from the roles of government and practitioners. Then it proposes seven key standards for validated educational models: comprehensiveness, documentation, internal consistency, capacity for faithful implementation, model effectiveness, training effectiveness, and capacity for and breadth of dissemination.

Standards

Research continues to demonstrate the great potential of high-quality preschool programs (Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2001; Olds, Eckenrode, Henderson, et al., 1997; Reynolds, Temple, Robertson, Mann, 2001; Schweinhart, Barnes, & Weikart, 1993). These programs have been found to be a worthwhile investment that not only helps prepare

children for school, but also improves their educational success and adult earnings, and helps them avoid committing crimes. Knowing of this potential, we citizens should deem it simply unacceptable to have programs that do not live up to the standards of these highly successful ones. The challenge is how to define standards that call for the level of quality that leads to desirable short- and long-term program outcomes.

What approach to standards should early childhood educators and policymakers take? Among the various types, three are especially important – regulatory, professional, and outcomes-based.

Government uses *regulatory standards*. States regulate child care with health and safety regulations (National Resource Center for Health and Safety in Child Care, 2001). The federal government regulates Head Start with performance standards that have been in place since the 1970s and were revised in 2000 (Administration for Children and Families, 2000). In general, regulatory standards focus on program practices rather than outcomes. They present legal minimums with which to comply and provide explicit guidance to program directors and practitioners who need to obtain and maintain a license or other authorization to operate. Published regulations differ in the degree to which they include their own rationale.

Professional associations issue *professional standards*. These standards tend to focus on program practices rather than outcomes and strive to educate and provide reasons to encourage thoughtful application of rules with professional discretion. The accreditation guidelines of the National Association for the Education of Young Children (1998) are an example.

Outcomes-based standards contrast with both regulatory and professional standards by focusing on learner outcomes rather than teaching practices. They resemble curriculum content standards that specify knowledge and skills that children are to master at each grade level. Tests

or other assessment tools typically assess children's accomplishment of outcomes-based standards. California is taking an outcomes-based approach to early childhood standards in its recent Desired Results project (California Department of Education Child Development Division, 2001). With its recent Child Outcomes Framework (Administration on Children, Youth and Families, 2000), Head Start is adding an outcomes-based approach to its existing performance standards.

Each of these approaches serves a different purpose. Regulatory standards detail how to carry out laws, whether the law be the Head Start Act or laws governing children's health and safety in child care settings. Professional standards call for a program to strive for quality. Outcomes-based standards elaborate on how a program is to contribute to children's development. Any one of these approaches may stand alone. For example, many schools focus only on child outcomes with little attention to either regulatory or professional standards, and some childcare programs focus only on regulatory standards. These approaches may also coexist and complement each other. For example, a Head Start program can meet the regulatory Head Start Performance Standards, follow the professional standards to achieve NAEYC program accreditation, and follow the outcomes-based standards of the Head Start Child Outcomes Framework. Given the importance of the goal of contributing to the lives of children, all three approaches have a vital role to play.

An education-and-care program has structural and behavioral characteristics. *Structural characteristics* are the program "hardware," the policies that are easy to specify, regulate, and verify and have clear cost implications because they involve readily identified categories and numbers, such as cost-per-child, staff salaries, group size, teacher-child ratio, teacher qualifications, hours of operation, what educational model and assessment tools are said to be

used, and the eligibility criteria for children and families. Structural characteristics are relatively easy for policymakers to specify and verify by staff reports. In contrast, *behavioral characteristics* are the program "software," the actual goals, objectives, teaching practices, program activities, child behavior, and assessment procedures employed in the program. Although a program's behavioral characteristics could also be assessed by staff reports, they require careful judgments that might be influenced by self-interests, so that program observation by outside observers helps achieve more accurate documentation of them. Because of these differences, regulatory and professional standards are more often applied to structural characteristics than to behavioral characteristics.

Replication

Preschool standards represent the values of the people who set them. But a central goal of all preschool care-and-education programs is to contribute to the learning and development of the children they serve (Schweinhart, 2002). Empirical research can produce evidence regarding how well various programs and practices achieve this goal as well as others. Thus, preschool programs and practices should be evidence-based. Still, it is not obvious exactly how to base specific programs and practices on research findings. Two types of studies that address this question are evaluations of educational models and process-product studies.

- *Educational model evaluations* compare a group of children who experience the model to a group of children who do not experience it. The design may be experimental or quasi-experimental, short-term or long-term. If effects are identified, the findings indicate that the model in all its complexity had the effects.
- *Process-product studies* correlate systematic program data with child outcomes data to identify which program practices are significantly related to child outcomes. This type of

study is inherently quasi-experimental. Its findings indicate which program practices have the strongest effects. Simply put, educational model evaluations identify effective models, while process-product studies identify effective practices.

These two study types relate directly to whether research findings are applied through practices or educational models, whether a program ought to replicate a collection of individually validated practices or a complete educational program. By their design, simple process-product studies provide empirical support for eclecticism – the pragmatic collection of educational best practices without reference to an underlying educational model.

There are several problems with seeing practices as basic replication units. It is hard to believe that specific practices have a consistent effect independently of the other practices with which they are combined, meaning that any process-product findings apply only to the programmatic combinations in which they take place. Further, process-product studies are necessarily quasi-experimental; it is virtually impossible to obtain experimental evidence of the effectiveness of a specific practice because the rest of the program as well as contextual variables would have to be held constant. Since best practices or program components are identified independently of each other, it is unknown how they function when randomly combined. Practitioners are left with the practical problem of how to integrate disparate, even contradictory, practices into a single program.

Educational model evaluations provide empirical support for a model and its practices. The model developer and others familiar with the model should be able to identify some practices that were more likely to have led to program effectiveness than others. For example, in the High/Scope Perry Preschool Program (Schweinhart et al., 1993), the plan-do-review sequence in the daily routine was more important to effectiveness than the fact that the program

was part-day rather than full-day. But the relative effectiveness of some other practices, as well as the limits on their flexibility, is debatable. For example, were weekly home visits essential to the lasting effectiveness of the Perry program? What if they had been bi-weekly or monthly? What if they had focused on adult literacy rather than parents' educational practices?

The Developer Role

An educational model developer is an organization that develops and validates an educational model so that it meets the requisite standards, such as the ones described later in this paper. To have a validated educational model, a model developer must see to it that scientific methods confirm that the model has the results it is intended to have. The developer is critical to providing the documentation and training required to ensure model replication. Nonetheless, government and practitioners do not always include developers within their partnership. Instead, either government or practitioners assume the developer role themselves, usually without adequate resources to do so. A current example involves California's Desired Results project, wherein the state department of education is developing a comprehensive definition of desired results, indicators, criteria for success, and measurement tools (California Department of Education Division of Child Development, 1998). Unfortunately, but not surprisingly, there has been no assessment of the reliability and validity of these measurement tools, nor has there been adequate training in their use.

When government assumes the role of developer, the result can be seen as micro-management. Some see an example of this assumption in the last Head Start reauthorization (U.S. Congress, 1998), which tried to apply very specifically the research findings assembled in the report *Preventing Reading Difficulties in Young Children* (National Research Council 1998). Drawing from this report, the law requires "educational performance measures that ensure that

children participating in Head Start programs (A) know that letters of the alphabet are a special category of visual graphics that can be individually named; (B) recognize a word as a unit of print; (C) identify at least 10 letters of the alphabet; and (D) associate sounds with written words." Some would say that these stipulations unduly prescribe performance measures. Yet the National Research Council report (1998) nowhere mentions, for example, a specific number of letters known by 4-year-olds that is associated with later reading success. Had Congress acknowledged the developer role in this case, the law would have specified that performance measures assess appropriate research-based literacy or pre-literacy skills, giving developers the latitude to identify these skills and measures.

On the other extreme, when government bypasses developers and expects practitioners to develop their own educational models, it is unlikely that they will engage in the systematic, incremental effort required to develop and validate an educational model, including the assessment system. While some of us might assemble a promising educational model from evidence-based practices, it is much more common for us to assemble our programs from a variety of practices that we believe in based on our experience, with little regard for scientific evidence of their effectiveness. This approach does generate the buy-in that is critical to educational model success, but does not result in educational models that have evidence of their effectiveness.

It is easy for us to delude ourselves into believing that ineffective programs are effective in contributing to children's learning and development because of the immediate positive feedback we receive from them. The Comprehensive Child Development Program (CCDP) may serve as an example. This program was built around making family case managers available to families throughout a child's early childhood years. Goodson, Layzer, St. Pierre, Bernstein, and

Lopez (2000) conducted an evaluation of it using an experimental design based on random assignment of children and families to the program or no program condition. They found that the children and parents involved in the program improved during their program years, but that the no-program group children and parents improved just about as much, so that there were no significant differences in group outcomes. In other words, the program case managers experienced improvement in children and families and reasonably attributed this improvement to their efforts in the program. But the experimental study did not find that their effort contributed anything extra to children's development. In the same way, practitioners who develop their own educational model may believe and perceive it to be contributing to children's development when the children would have developed just as much without it or with another educational model.

Standards for Validated Educational Models

Evaluating educational models, Epstein, Schweinhart, and McAdoo (1996) identified the categories of curriculum, training, and dissemination. Building on this earlier work, the purpose of the rest of this paper is to consider and examine the following categories of standards for validated educational models:

- Comprehensiveness
- Documentation
- Internal consistency
- Capacity for faithful implementation
- Model effectiveness
- Training effectiveness
- Capacity for and breadth of dissemination

There have been similar efforts to identify such standards. One led to the criteria for entire-school models at all grades from prekindergarten through grade 12 developed by the Northwest Regional Educational Laboratory for its *Catalog of School Reform Models* – evidence of effectiveness, scale-up record and capacity, training and implementation support, and comprehensiveness. During the pat three decades, the U.S. Department of Education (and the U.S. Office of Education before it) has maintained panels for a similar purpose. The first such effort was the Joint Dissemination and Review Panel (1972-1987), followed by the Program Effectiveness Panel (1987-1996), and, since 1994, a system of independent expert panels in various subject domains (Klein et al., 2001).

Comprehensiveness

In early childhood, comprehensiveness means mainly that the cognitive, affective, and physical dimensions of the learning experience must always be taken into account. The National Education Goals Panel (Kagan, Moore, & Bredekamp, 1995) elaborated this longstanding formula by identifying five domains of school readiness: (1) physical well-being and motor development, (2) social and emotional development, (3) approaches toward learning, (4) language development, and (5) cognition and general knowledge. Basically, this formulation divides the affective domain into social/emotional and approaches toward learning and the cognitive domain into language and cognition/general knowledge. A few years later, the Head Start Bureau elaborated this formulation into the Head Start Child Outcomes Framework – an entire matrix of domains, made up of domain elements and examples of indicators within each domain element (Administration on Children, Youth and Families, 2000). It has eight domains – language development, literacy, mathematics, science, creative arts, social and emotional development, approaches to learning, and physical health and development. The framework

serves as the definition of content for Head Start child outcomes assessment and by implication, educational model content as well.

Obviously, model comprehensiveness in early childhood does not mean delving deeply into the many specializations of modern knowledge, but rather emphasizing the basic ideas in the major domains of modern knowledge. For example, flowers are an appropriate topic, as well as a few species of flowers that are present in the child's environment, such as dandelions or daisies. But learning to identify many species of flowers is inappropriate in early childhood. There are countless other instances of this principle. In essence, preschool education should address many domains at levels of complexity appropriate to each child's level of development. In addition to precluding too much complexity, this principle also calls for emphasis on the central ideas or ways of knowing of each domain. It calls for young children to learn to think like young readers, young mathematicians, young scientists, young citizens, and so forth.

Special attention should be given to learning how to learn, through open-ended problem solving with many right answers, closed-ended problem solving with one right answer, and developing the basic symbolic processing skills of literacy and mathematics. Literacy being the principal gateway to symbolic learning, this principle calls for specification not simply of when children should learn to read, but of a continuum of literacy skills that are appropriate to children's development at various ages.

Documentation

An educational model that is well documented can be replicated in programs well enough to get the effects found in the model's validation study. Documentation means description and communication of model operation that enables other programs to do what the documented program did. A point of debate among model developers (related to the discussion about

regulatory versus professional standards) is how precisely educational practices need to be replicated to assume that they lead to the same results.

- Some believe in tight, precise replication – essentially following a script that tells teachers exactly what to do and requires them to make minimal interpretation or judgment. Direct Instruction (Kinder & Carnine, 1991) is an example. This approach in effect defines educational models by regulatory standards. Proponents argue that it is the approach that is best suited to the low-paid, service-level teachers that are now the norm in many preschool programs.
- Some believe in replication of principles and practices of preschool education that provide guidance to teachers, which they are to intelligently apply to actual program situations. High/Scope (Weikart & Schweinhart, 2000) is an example, including specific practices such as the plan-do-review sequence, steps to follow in conflict resolution, and key child development activities to focus on. This approach defines educational models by professional standards, but permits external model assessment and, as such, is an approach to preschool education that is both professional and accountable.
- Some believe in application of general principles of child development that teachers are to interpret for themselves to develop their own educational models, albeit within parameters of acceptability. Bank Street (Biber, 1984), Reggio Emilia (New, 2000), and postmodernist early childhood thinking in general (Lubeck, 1996), are examples. This approach also defines educational models by professional standards, but eschews external model assessment and accountability as inappropriate and even impossible. It is an appealing approach in programs in which the parents or other funders have the same perspective.

The proof of clear, accurate documentation lies in faithful model implementation in a program, as confirmed by systematic observation or some other means of data collection. A clearly documented educational model should be readily viewable through an assessment system that shows the model to be in operation in a given program.

Internal Consistency

Internal consistency means that a model's program practices, curriculum content, assessment tools and practices, and staff training practices should all be basically consistent with its goals and objectives. For example, suppose a model has the objective of helping children learn to express their ideas. Practices such as helping children learn to plan their activities and to express their opinions on classroom activities would be consistent with this objective, while the practice of expecting children always to give right answers to teacher questions would not. In particular, the educational model's assessment tools and practices should express the model's goals and objectives. Indeed, specifying an assessment system helps fully document the model's goals and objectives. For example, if a program uses an educational model that emphasizes child-initiated learning activities, so should the program's child assessment system. The training system used to disseminate the educational model should be consistent with the model of which it is part. A model that emphasizes student-initiated learning activities, for example, should have a training system that emphasizes student-initiated learning activities. That is not to say that the training system should treat adult learners as if they were young children; educational models must recognize basic differences between adults and young children. Nonetheless, the model's goals ought to have age-appropriate applications to both adults and young children.

Capacity for Faithful Implementation

Capacity for faithful implementation is the empirical dimension of educational model consistency. Practitioners must be able to faithfully implement the model in various programs. All of a model's components – goals, objectives, program practices, curriculum content, assessment tools and practices, and staff training practices – must be capable of being faithfully implemented.

A program that uses an educational model should operate consistently with the documented model. A well-documented model therefore calls for a program assessment system that embodies the standards or levels of the criteria that are required for a program to demonstrate an acceptable level of fidelity to the model. A program assessment system should manifest an acceptable level of reliability, which constitutes an empirical test of the model's internal consistency; and acceptable levels of validity, particularly as judged by its relationships with training in the model on the one hand and the model's designated child outcomes on the other.

An educational model should achieve its goals and objectives for children's development. Specification of a model's goals and objectives for children's development finds its internal conclusion in a child-outcomes assessment system. The Head Start Child Outcomes Framework provides the parameters of such an assessment system without prescribing all the indicators or the instrumentation to measure them. The Head Start Bureau intentionally stopped short of full definition of indicators and instrumentation so as to permit model developers to complete the process by developing instruments that do provide full instrumentation for the indicators specific to the educational model within the framework of the specified domains and domain elements. The only exceptions to this principle are the congressionally mandated indicators mentioned

earlier. As with the program assessment system, the child outcomes assessment system that supports a model should have acceptable levels of reliability and validity.

Model Effectiveness

The reason to use an educational model is that research has demonstrated its effectiveness in similar situations so that its replication in a given program should lead to the same results. Effectiveness means achievement of the model's stated goals and objectives. Similar situations mean that the structural characteristics and context of the targeted program are sufficiently similar to the structural characteristics of the originally studied program to permit confident generalization of the results. As stated previously, structural characteristics are the program hardware, such as level of per-child funding, teacher qualifications, and child eligibility criteria. Context refers to additional characteristics of participating children and families and the neighborhood and community in which they live. Head Start, for example, has a national eligibility standard of family income below the poverty level for most children enrolled, but within this constraint, participating children and families vary greatly with respect to ethnicity, home language, family income, and other characteristics.

The demand for evidence of model effectiveness in similar situations generally outstrips the supply of such evidence, so that in practice the results of such studies are often over-generalized. Nowhere has this been truer than with the High/Scope Perry Preschool Study (Schweinhart et al., 1993). While it is reasonable to generalize the long-term findings of this study to high-quality preschool programs using a similar educational model with young American children living in poverty, some have applied these findings to programs of much lower quality that do not use a similar model and to children who are quite different from the children in the study. These over-generalizations are made not because their proponents are

dishonest or reckless, but rather because they are responsible for programs and children for whom no comparable research exists, and they are trying to do the best they can for these children. In effect, they are inadequately identifying and replicating the program features that led to the studied program's effectiveness.

Training Effectiveness

A simple educational-model-effectiveness study assumes that its teachers are faithfully implementing the model. The teachers in such a study are seen to represent all teachers who faithfully implement the model. But even within the context of faithful implementation, teachers are making moment-to-moment decisions that are guided not just by the model's guiding principles, goals, and objectives, but also by all the rest of their experience. To put it another way, they are intelligently *applying* the model rather than merely *complying* with it. As discussed under documentation, educational models vary with respect to how much of this variation in application they expect – from total compliance, through various degrees of intelligent application, to intelligent thought loosely consistent with the model's guiding principles. Whatever the model and its tightness of definition, however, teachers need to learn how to use it through some combination of study, training, and reflection on their experience with it.

As previously stated, the training program should embody the model's principles of learning applied to adults. In theory, a teacher can learn an educational model solely by study and reflection without exposure to training. In practice, almost all teachers learn a model not only by study and reflection but also by training, that is, interaction with persons competent in disseminating the model effectively to others. Evidence and experience suggest that for a comprehensive educational model that addresses all aspects of children' s development, such

training must be substantial and distributed over time, with training sessions interspersed with real-life practice (Epstein, 1993; National Research Council, 2001). While much of such focused training takes place in inservice training programs, increasingly it is taking place in preservice teacher education programs in colleges and universities. The Montessori model has a strong tradition of preservice education. The challenges for broader teacher education programs are to incorporate one or more educational models for substantial periods of time and in general, to seek out evidence of the effectiveness of their programs. A study of educational-model effectiveness must either assume effective training or examine it explicitly, in a sequence of studies that looks at training effectiveness as well as effectiveness of model implementation. Epstein (1993) conducted such a study of the High/Scope model training system, taking the sequence a step further back by including a study of the effects of a training-of-trainers program as well.

Capacity for and Breadth of Dissemination

Breadth of dissemination has to do with the track record of the model's overall training effort – how far it has reached, how many teachers and students it engages. People do not apply the formal scientific method to most of their experience, but hopefully they do apply an informal scientific method of gathering information, analyzing it, drawing conclusions, then testing these conclusions against further information they gain from their subsequent experience. Thus, amount of dissemination represents the amount of experience with an educational model and the wisdom that grows as that experience accumulates.

Capacity for dissemination is the likelihood that a model developer can provide some number of programs with the training, materials, and support they need to implement the model

effectively. Breadth of previous dissemination, that is, how many teachers have already been trained and are using the model, is one key source of evidence of capacity for dissemination. Even more to the point are the number and quality of teacher trainers currently actively engaged in providing training in the model. A related consideration is the cost of such training, materials, and support, to the program whose staff receive the training and to government or other third parties who provide financial support for the endeavor. Given the increased demand for high-quality preschool programs, and the growing recognition that such programs must be evidence-based to achieve the requisite quality, the capacity for dissemination is crucial. In order to be useful, usable, and used, the capacity must exist for the model to be disseminated at a reasonable cost to a substantial number of programs serving young children.

Concluding Summary

If universal access to education-and-care programs for 3- and 4-year-olds is to become reality in the U.S., it will be due to a national movement that takes up this idea and puts it into practice in state after state, much as kindergarten programs for 5-year-olds spread across the country over the past century. This simple vision, however, must be matched by complex legislation and policies that set high standards for program quality and effectiveness. Without such high standards, these programs could waste time, effort, and money. The national movement, then, must struggle against the natural temptation to dilute standards as we establish the policies that move educational models to full scale.

A central component of this effort is policies that support those who develop and produce supporting evidence for educational models. Standards should be established not only for practitioners who implement programs, but also for the educational models that developers produce. This paper has proposed seven such standards so that programs will center on

replicating validated educational models – comprehensiveness, documentation, logical consistency, capacity for faithful implementation, model effectiveness, training effectiveness, and capacity for and breadth of dissemination.

Care-and-education programs open to all 3- and 4-year-olds throughout the U.S. constitute an extraordinary vision. Without a focus on high standards of quality, however, this vision is but an empty promise. With high standards of quality, such as the ones identified in this paper, the vision will transform America's schools and future generations of children.

References

Administration for Children and Families. (2000). Head Start program regulations and program guidance for parts 1304 and 1308. Retrieved December 8,2001, from http://www2.acf.dhhs.gov/programs/hsb/regs/regs/rg_index.htm.

Administration on Children, Youth and Families. (2000, August 10). Information memorandum: Using child outcomes in program self-assessment. Log No. ACYF-IM-HS-00-18. Retrieved December 8,2001, from http://www.headstartinfo.org/publications/pdf/im00/im00-18a.pdf.

Biber, B. (1984). *Early education and psychological development.* New Haven, CT: Yale University Press.

California Department of Education Child Development Division. (2001). Desired Results for Children and Families Program Summary. Sacramento, CA: Author. Retrieved December 8,2001, at http://www.cde.ca.gov/cyfsbranch/child_development/DR2.htm

Campbell, F. A., Ramey, C. T., Pungello, E. P., Sparling, J., & Miller-Johnson, S. (2001). Early childhood education: Young adult outcomes from the Abecedarian Project. *Applied Developmental Science.*

Epstein, A. S. (1993). *Training for quality: Improving early childhood programs through systematic inservice training* (Monographs of the High/Scope Educational Research Foundation, 9). Ypsilanti, MI: High/Scope Press.

Epstein, A. S., Schweinhart, L. J., & McAdoo, L. (1996). *Models of early childhood education.* Ypsilanti, MI: High/Scope Press. ED 395 707.

Goodson, B. D., Layzer, J. I., St. Pierre, R. G., Bernstein, L. S., & Lopez, M. (2000). Effectiveness of a comprehensive, five-year family support program for low-income children and their families: Findings from the Comprehensive Child Development Program. *Early Childhood Research Quarterly, 15,* 5 -39.

Kagan, S. L., Moore, E., & Bredekamp, S. (1995). Reconsidering children's early development and learning: Toward common views and vocabulary. Washington, DC: National Education Goals Panel. Retrieved December 8,2001, from http://www.negp.gov/Reports/child-ea.htm

Kinder, D., & Carnine, D. (1991). Direct Instruction: What it is and what it is becoming. *Journal of Behavioural Education, 1* (2), 193- 213.

Klein, S., Tones, L., Weinberg, L., Dwyer, C., Klaiber, S. Simon, P., Datta, L., Evans, J., & Katzenmeyer, C. (2001). Historical roots of the system of expert panels. Washington, DC: U.S. Department of Education. Retrieved December 8, 2001, from http://www.ed.gov/offices/OERI/ORAD/KAD/expert_panel/historic.html.

Lubeck, S. (1996). Deconstructing "child development knowledge" and "teacher preparation." *Early Childhood Research Quarterly, 11*, 147- 167.

National Association for the Education of Young Children. (1998). *Accreditation criteria & procedures of the National Association for the Education of Young Children.* Washington, DC: Author.

National Resource Center for Health and Safety in Child Care. (2002). *Caring for our children: national health and safety performance standards: guidelines for out-of-home child care programs,* 2nd ed. Individual states' childcare licensure regulations. Retrieved December 8, 2001 from http://nrc.uchsc.edu/states.html.

National Research Council 1998). *Preventing reading difficulties in young children.* Committee on the Prevention of Reading Difficulties in Young Children. C. E. Snow, M. S. Burns, & P. Griffin (Eds.). Commission on Behavioral and Social Sciences in Education. Washington, DC: National Academy Press. Retrieved December 8,2001, from http://www.nap.edu/books/030906418X/html/index.html.

National Research Council (2001). *Eager to learn: Educating our preschoolers.* Committee on Early Childhood Pedagogy. B. T. Bowman, M. S. Donovan, & M. S. Burns (Eds.). Commission on Behavioral and Social Sciences in Education. Washington, DC: National Academy Press. Retrieved December 8,2001 from http:/ www.nap.edu/books/0309068363/html/.

New, R. (2000). Reggio Emilia: An approach or an attitude? In J. L. Roopnarine & J. E. Johnson (Eds.), *Approaches to early childhood education.* New York: Prentice Hall.

Northwest Regional Educational Laboratory (2001). *The catalog of school reform models.* Retrieved December 8,2001, from http://www.nwrel.org/scpd/catalog/guide.shtml.

Olds, D. L., Eckenrode, J., Jr., Henderson, C. R., et al. (1997). Longterm effects of home visitation on maternal life course, child abuse and neglect, and children's arrests: Fifteen year follow-up of a randomized trial. *Journal of the American Medical Association, 278* (8), 637 - 643.

Reynolds, A. .T., Temple, .T. A., Robertson, D. L., Mann, E. A. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest: A 15-year follow-up of low-income children in public schools. *Journal of the American Medical Association, 285*(18), 2339 - 2346.

Schweinhart, L. J. (2002). The three types of early childhood programs in the U.S. In A. J. Reynolds, M. C. Wang, & H. J. Walberg (Eds.). *Early childhood programs for a new century (Issues in children's and families' lives series).* Washington, DC: CWLA Press.

Schweinhart, L. J., Barnes, H. V., & Weikart, D. P. (1993). *Significant benefits: The High/Scope Perry Preschool Study through age 27. (Monographs of the High/Scope Educational Research Foundation,* 10). Ypsilanti, MI: High/Scope Press. PS021 998.

U.S. Congress. (1998, October 27). Coats Human Services Amendments of 1998, PL105-285 to the Omnibus Budget Reconciliation Act of 1981, PL97-35, Title VI, Subtitle A, Chapter 8, Subchapter B.

Weikart, D. P., & Schweinhart, L. J. (2000). The High/Scope Curriculum for early childhood care and education. In J. L. Roopnarine & J. E. Johnson (Eds.), *Approaches to Early Childhood Education.* New York: Prentice Hall.

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